

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 1 (original): A method of authenticating a client to a server comprising:
2 generating a challenge at the client;
3 signing the challenge to form a signed challenge;
4 sending at least the signed challenge to the server;
5 verifying the signature of the challenge at the server; and
6 if the signature is verified, sending an indication of successful authentication to
7 the client.

1 2 (original): The method of claim 1, wherein generating a challenge at the client
2 comprises generating a random number.

1 3 (original): The method of claim 1, wherein generating a challenge at the client
2 comprises generating a sequential challenge.

1 4 (original): The method of claim 1, wherein generating a challenge at the client
2 comprises generating a challenge based on data received from the server in a prior step.

1 5 (original): The method of claim 4, wherein the data received from the server is
2 a challenge returned with a server response to a prior client query.

1 6 (original): A method of using a one-time use card number for an online
2 transaction, comprising:
3 generating a one-time use card number at a user system;
4 authenticating the user system to an issuer system;
5 passing the one-time use card number from the user system to the issuer system;

6 passing the one-time use card number from the user system to a merchant system,
7 wherein the merchant system is programmed to present the one-time use card number to the
8 issuer system to effect a payment;

9 verifying the one-time use card number received from the merchant system with
10 the one-time use card number received from the user system; and
11 if the one-time use card number is verified, approving the transaction.

1 7 (original): The method of claim 6, wherein passing the one-time use card
2 number to the issuer includes passing at least one other data element related to the online
3 transaction.

1 8 (original): The method of claim 7, wherein the at least one other data element
2 is selected from, or a function of, a user's account number, a user's private key, a transaction
3 time, a transaction amount, or a merchant ID.